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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,791	02/09/2004	Mark J. Hampden-Smith	41890-01685	9037

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/774,791

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

George P Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20040229 (Divisional application).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 131-143 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 131-136 and 139-143 is/are rejected.
- 7) ☒ Claim(s) 137 and 138 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. The preliminary amendment filed with this divisional application canceling claims 1-130 and 144-154 has been entered. The pending claims are claims 131-143.

2. Claim 143 is objected to because:

a) In line 2 of this claim, "the particulate product" lacks proper antecedent basis.

b) In line 3 of this claim, it appears that "compromises" should read --comprises--.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 131-136 and 139-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranade et al. (U.S. Patent 5,928,405) in view of Maher (U.S. Patent 4,500,368).

Ranade discloses making spherical silver-palladium alloy particles having an average size within the range as recited in instant claim 131. Based on Figs. 5A and 5A-1 of Ranade, it is clear that at least 90% of the prior art particles are less than twice the average size. Ranade discloses that these particles are suitable for use as multi-layer capacitor electrode materials; see Ranade column 8, lines 16-20.

Ranade does not disclose the crystallite size of these particles, and does not specify applying a paste including the particles and a liquid carrier to a substrate and heating to remove the liquid as required in the instant claims. However,

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a) The particles of Ranade are of the same composition and are made in a manner in accord with the methods as disclosed in the present specification for production of such particles. It is thus a reasonable assumption that the resulting physical characteristics, such as crystallite size, would likewise be the same in either instance.

b) Maher indicates that it was known in the art, at the time of the invention, to form multilayer capacitors from silver-palladium particles by dispersing the particles in an organic liquid and heating to a temperature as recited in the instant claims in order to form conductive layers of such a capacitor. With regard to instant claims 136, 139 and 140, Maher teaches that the heating step results in the formation of a PdO phase, consistent with the language of the instant claims.

Therefore, the combined disclosures of Ranade et al. and Maher would have motivated one of ordinary skill in the art to form particles having the characteristics as recited in the instant claims, and to form multilayer capacitors from such particles by applying a liquid dispersion of the particles to a surface and heating to remove the liquid, a process in accord with that presently claimed.

5. Claims 137 and 138 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or suggest forming a film by applying a paste including both silver containing particles as defined in the instant claims and second phase dielectric particles to a substrate, where the substrate on which the film is formed comprises the same material as the second phase.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective October 1, 2003, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW  
March 15, 2005

  
GEORGE WYSZOMIERSKI  
PATENT EXAMINER  
GROUP 1700